Lesson 19

Objective: Use objects and drawings to find *how many are left*.

Suggested Lesson Structure

■ Fluency Practice	(11 minutes)	
■ Application Problem	(5 minutes)	
■ Concept Development	(26 minutes)	
■ Student Debrief	(8 minutes)	
Total Time	**(50 minutes)**	
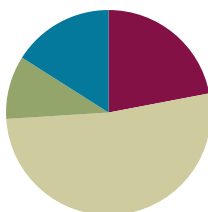
Fluency Practice (11 minutes)

- Happy Counting **K.CC.2**   (3 minutes)
- Building *1 More* and *1 Less* Towers **K.CC.4c**   (4 minutes)
- Make It Equal **K.CC.6**   (4 minutes)

Happy Counting (3 minutes)

Note: This activity helps students internalize the whole number counting sequence and become comfortable changing directions in their count.

> T: Let's play Happy Counting! Remember, when I hold my hand like this (two fingers pointing up), I want you to count up. If I put my hand like this (two fingers pointing down), I want you to count down. If I do this (closed fist), that means stop, but try hard to remember the last number you said. Ready?
>
> S: (Teacher's fingers up) 1, 2, 3, 4, 5 (closed fist, fingers pointing down), 4, 3, 2, 1 (closed fist, fingers up), 2, 3 (closed fist, fingers down), 2, 1 (closed fist, fingers up), 2, 3, 4, 5 (closed fist, fingers down), 4, 3 (closed fist, fingers up), 4, 5, 6 (closed fist, fingers down), 5, 4 (closed fist, fingers up), 5, 6, 7, 8 (closed fist, fingers down), …

Continue Happy Counting to ten 3 (i.e., 13), increasing the numbers as students demonstrate mastery.

Building *1 More* and *1 Less* Towers (4 minutes)

Materials: (S) 10 linking cubes

Note: This activity helps students transition from addition to subtraction operations in preparation for today's lesson.

Guide students through the process of building a tower while stating the pattern as *1 more*. Maintain consistency in the language: 1. 1 more is 2. 2. 1 more is 3. 3. 1 more is 4. (Continue to 10.)

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Disassemble the tower while stating the pattern as *1 less*. Again, the language is crucial to students' conceptual understanding: 10. 1 less is 9. 9. 1 less is 8. 8. 1 less is 7. (Continue to 0.)

If students are ready for the challenge, begin constructing the towers again, but stop the *1 more* sequence at 5. Change directions, using the *1 less* sequence. Continue moving up and down according to the teacher directions, as in Happy Counting.

Make It Equal (4 minutes)

Materials: (S) Bags of cubes, laminated paper or foam work mat, dice (per pair)

Note: Students add and take away objects in this fluency activity, helping to solidify the shared numerical relationships underlying both addition and subtraction.

1.   The teacher introduces the term *equal* as meaning *the same number*.
2.   Both partners roll dice and put that many cubes on their mat.
3.   Partner A has to make her cubes equal to her partner's by taking off or putting on more cubes.
4.   Partner B counts to verify.
5.   Students switch roles and play again.

Application Problem (5 minutes)

Materials: (S) Small ball of clay

The mice are hungry today! Make 5 little pieces of cheese out of your clay, and put them on your desk. Pretend that a pair of little mice came to your desk (a pair means 2 mice!) and that each of them stole a piece of cheese. Take away their pieces to show that they ate them. How many pieces are left?

Now, start with 4 morsels of cheese, and act out the story again. How many are left?

Talk about the mice and the cheese with your partner. Did he have the same number of pieces left each time? What do you think would happen if you had only 3 pieces of cheese before they came?

Note: This concrete application of *how many are left* serves as the anticipatory set for today's lesson. Circulate during the activity to observe which students might need extra support with concrete materials during this topic.

NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Introduce the term *pair* to English language learners before the lesson by showing them lots of pictures of pairs of things (e.g., eyes, arms, or legs). Have students practice saying the word, and ask them to provide examples of pairs of things they can think of. Have them use two fingers to represent the pair of mice and act out the story. Once they have learned the word, they are able to solve the Application Problem.

Concept Development (26 minutes)

Materials: (S) Personal white board

- T: Who knows the song "Five Little Monkeys Jumping on the Bed"?
- S: Me! Me!
- T: We are going to sing it today. Let's pretend your fingers are the monkeys. Show me 5 monkeys the Math Way. (Demonstrate.) Show me your monkeys jumping! (Waving hand and wiggling fingers in the air, sing …)
- T/S: *5 little monkeys jumping on the bed; one fell off and bumped his head. Mama called the doctor, and the doctor said, "NO MORE MONKEYS JUMPING ON THE BED!"*
- T: Oh no! One of our monkeys fell off! We had 5, but we need to **take** one **away**. How many monkeys are left?
- S: 4.
- T: Yes. 5 take away 1 is 4. Show me your 4 monkeys!

Repeat until all the monkeys have fallen.

- T: How many monkeys are left?
- S: None!
- T: Let's make a picture about the song we just sang. Draw circles on your personal white board to show your 5 monkeys. Let's pretend the first monkey just fell. What can we do to the picture to show that 1 monkey fell?

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- S: Cross off the monkey.
- T: Yes! Let's cross off a circle to show that he fell. (Demonstrate.) **How many are left** on the bed? Use a complete sentence.
- S: There are 4 left on the bed.
- T: 5 monkeys take away 1 monkey is…?
- S: 4 monkeys!
- T: Now the next monkey fell. Cross off another circle. You had 5 monkeys in the beginning. 2 monkeys have fallen. How many are left on the bed now?
- S: Now there are 3 left on the bed.
- T: 5 take away 2 is…?
- S: 3.

> **NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:**
>
> Scaffold the lesson for students working below grade level and for those who seem unsure during the "monkeys jumping on the bed" portion of the lesson by providing them with manipulatives to help them make their drawings. Pair students who need the extra support to make the task more meaningful and manageable.

Repeat the exercise with the same pattern until all the monkeys are crossed out, each time emphasizing the language of *take away* and *how many are left.* Circulate during the discussion to see which students might benefit from using linking cubes or other counters to support their drawings.

T: Erase your board. Let's pretend each monkey had a banana. Draw 5 bananas. (Allow time for drawing.)

T: During the song, 2 bananas were squished. Cross off 2 bananas to show the ones that were squished. (Demonstrate.) How many are left?

S: There are 3 left.

T: 5 take away 2 is…?

S: 3.

T: Erase your board. Let's pretend the monkeys liked to eat strawberries instead. Draw a strawberry for each monkey. How many strawberries did you draw?

S: 5.

T: During their game, 4 of the strawberries rolled onto the floor. Cross off 4 strawberries to show the ones that rolled. (Demonstrate.) How many are left?

S: There is only 1 left!

T: 5 take away 4 is…?

S: 1.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted time.

Student Debrief (8 minutes)

Lesson Objective: Use objects and drawings to find *how many are left.*

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- Look at the things you crossed out on your Problem Set. Compare your Problem Set with your neighbor's. Did you cross out the same things? Does it matter which things you crossed out?
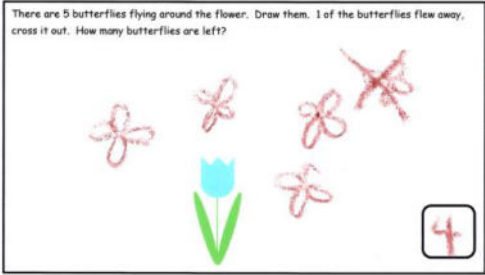
- Is the number you wrote in the box the same as your neighbor's, even though you might have crossed out different things?
- What happened when a monkey fell off the bed in our song? What did you have to do with your fingers?
- How did we use our math words to talk about what happened in the song?
- How did your drawings help you solve the other stories in our lesson? What did the crossed-off parts show?

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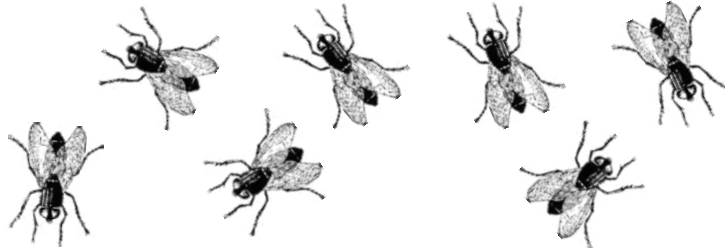
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Name _____   Date _____

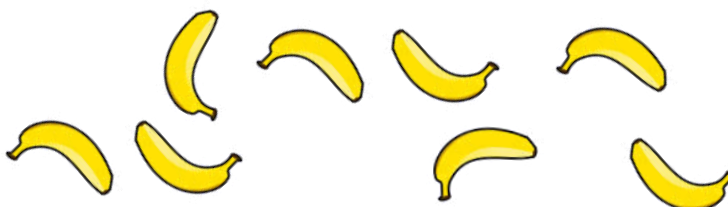The cat ate 3 mice. Cross out 3 mice. Write how many mice are left.
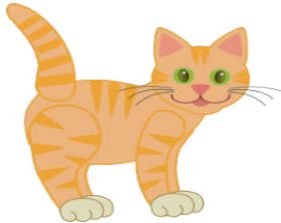
The fish ate 2 worms. Cross out 2 worms. Write how many worms are left.
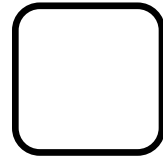
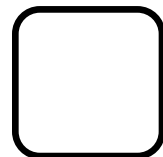The frog ate 5 flies. Cross out 5 flies. Write how many flies are left.

The monkey ate 4 bananas. Cross out 4 bananas. Write how many bananas are left.

Draw 6 balls. The boy kicked 3 balls down the hill. How many balls does he have left?

There are 5 butterflies flying around the flower. Draw them. 1 of the butterflies flew away, so cross it out. How many butterflies are left?

Name _____   Date _____

1 train drove away. Cross out 1. Write how many were left.

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2 horses were bought. Cross out 2. How many were left at the store?

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4 ducks swam away. Cross out 4. Write how many are left.

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There are 7 apples in the tree. Draw them. A bird ate 1 of them, so cross it out. How many apples are left?

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